

Name: _____

pa1106: Factoring with box when $a = \text{prime}$ (v13)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18 , until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	-6
2x	$2x^2$	$-12x$
3	3x	-18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $7x^2 + 41x + 30$.

*	x	5
7x	$7x^2$	$35x$
6	6x	30

ANSWER: $(7x + 6)(x + 5)$

Question 2

Use the box to factor $5x^2 - 6x - 8$.

*	x	-2
5x	$5x^2$	-10x
4	4x	-8

ANSWER: $(5x + 4)(x - 2)$

Question 3

Use the box to factor $3x^2 - 32x + 64$.

*	x	-8
3x	$3x^2$	-24x
-8	-8x	64

ANSWER: $(3x - 8)(x - 8)$